

INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application No.	10/582,006
	Filing Date	June 7, 2006
	First Named Inventor	Lai et al.
	Art Unit	1632
(Multiple sheets used when necessary)	Examiner	Unknown
SHEET 1 OF 5	Attorney Docket No.	NIH272.001NP

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number Number - Kind Code (if known) Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name of Patentee or Applicant	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	1.	6,184,024 B1	02-06-2001	Lai et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document Country Code-Number-Kind Code Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name of Patentee or Applicant	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T ¹
	2.	WO 99/55369 A1	11-04-1999	SmithKline Beecham Corp.		

NON PATENT LITERATURE DOCUMENTS			
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	3.	ALLEN, J.M. et al. (1989) "Isolation and expression of functional high-affinity Fc receptor complementary DNAs." <i>Science</i> 243:378-381.	
	4.	AMES, R.S. et al. (1995) "Conversion of murine fabs isolated from a combinatorial phage display library to full length immunoglobulins." <i>J. Immunol. Methods</i> 184:177-186.	
	5.	ARMOUR, K.L. et al. (1999) "Recombinant human IgG molecules lacking Fcγ receptor I binding and monocyte triggering activities." <i>Eur. J. Immunol.</i> 29:2613-2624.	
	6.	BARBAS, C.F. et al. (1991) "Assembly of combinatorial antibody libraries on phage surfaces: the gene III site." <i>PNAS USA</i> 88:7978-7982.	
	7.	BARBAS, C.F. et al. (1994) "In vitro evolution of a neutralizing human antibody to human immunodeficiency virus type 1 to enhance affinity and broaden strain cross reactivity." <i>PNAS USA</i> 91:3809-3813.	
	8.	BRANDRISS, M.W. et al. (1986) "Lethal 17D yellow fever encephalitis in mice. I. Passive protection by monoclonal antibodies to the envelope proteins of 17D yellow fever and dengue 2 viruses." <i>J. Gen. Virol.</i> 67:229-234.	
	9.	BRAY, M. et al. (1991) "Dengue virus premembrane and membrane proteins elicit a protective immune response." <i>Virology</i> 185:505-508.	
	10.	BURTON, D.R. et al. (1994) "Efficient neutralization of primary isolates of HIV-1 by a recombinant human monoclonal antibody." <i>Science</i> 266:1024-1027.	
	11.	CHAMBERS, T.J. et al. (1990) "Flavivirus genome organization, expression, and replication" <i>Annu. Rev. Microbiol.</i> 44:649-688.	
	12.	CHAPPEL, M.S. et al. (1991) "Identification of the Fcγ receptor class I binding site in human IgG through the use of recombinant IgG1/IgG2 hybrid and point-mutated antibodies." <i>PNAS USA</i> 88:9036-9040.	
	13.	COX, J.P. et al. (1994) "A directory of human germ-line Vκ segments reveals a strong bias in their usage." <i>Eur. J. Immunol.</i> 24:827-836.	

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	14.	CROWE, J.E., Jr. et al. (1994) "Recombinant human respiratory syncytial virus (RSV) monoclonal antibody Fab is effective therapeutically when introduced directly into the lungs of RSV-infected mice." <i>PNAS USA</i> 91:1386-1390.	
	15.	DORAI, H. et al. (1987) "The effect of dihydrofolate reductase-mediated gene amplification on the expression of transfected immunoglobulin genes." <i>J. Immunol.</i> 139:4232-4241.	
	16.	DURBIN, A.P. et al. (2001) "Attenuation and immunogenicity in humans of a live dengue virus type 4 vaccine candidate with a 30 nucleotide deletion in its 3'-untranslated region." <i>Am. J. Trop. Med. Hyg.</i> 65:405-413.	
	17.	EHRlich, P.H. et al. (1988) "Further characterization of the fate of human monoclonal antibodies in rhesus monkeys." <i>Hybridoma</i> 7:385-395.	
	18.	EHRlich, P.H. et al. (1990) "Potential of primate monoclonal antibodies to substitute for human antibodies: nucleotide sequence of chimpanzee Fab fragments." <i>Hum. Antib. Hybrid.</i> 1:23-26.	
	19.	EHRlich, P.H. et al. (1991) "Nucleotide sequence of chimpanzee Fc and hinge regions." <i>Mol. Immunol.</i> 28:319-322.	
	20.	FALGOUT, B. et al. (1990) "Immunization of mice with recombinant vaccinia virus expressing authentic dengue virus nonstructural protein NS1 protects against lethal dengue virus encephalitis." <i>J. Virol.</i> 64:4356-4363.	
	21.	FALGOUT, B. et al. (1991) "Both nonstructural proteins NS2B and NS3 are required for the proteolytic processing of dengue virus non-structural proteins." <i>J. Virol.</i> 65:2467-2475.	
	22.	GENTRY, M.K. et al. 1982 "Identification of distinct antigenic determinants on dengue 2 virus using monoclonal antibodies." <i>Am. J. Trop. Med. Hyg.</i> 31:548-555.	
	23.	GLAMANN, J. et al. (1998) "Simian immunodeficiency virus (SIV) envelope-specific Fabs with high-level homologous neutralizing activity: recovery from a long-term-nonprogressor SIV-infected macaque." <i>J. Virol.</i> 72:585-592.	
	24.	GONCALVEZ, A.P. et al. (2004) "Chimpanzee fab fragments and a derived humanized immunoglobulin G1 antibody that efficiently cross-neutralize dengue type 1 and type 2 viruses." <i>J. Virol.</i> 78:12910-12918.	
	25.	GONCALVEZ, A.P. et al. (2004) "Epitope determinants of a chimpanzee Fab antibody that efficiently cross-neutralizes dengue type 1 and type 2 viruses map to inside and in close proximity to fusion loop of the dengue type 2 virus envelope glycoprotein." <i>J. Virol.</i> 78:12919-12928.	
	26.	GOULD, E.A. et al. (1986) "Neutralizing (54K) and non-neutralizing (54K and 48K) monoclonal antibodies against structural and non-structural yellow fever virus proteins confer immunity in mice." <i>J. Gen. Virol.</i> 67:591-595.	
	27.	HALSTEAD, S. (1982) "Immune enhancement of viral infection." <i>Prog. Allergy</i> 31:301-364.	
	28.	HEINZ, F.X. (1986) "Epitope mapping of flavivirus glycoproteins." <i>Adv. Virus Res.</i> 31:103-168.	
	29.	HEINZ, F.X. et al. (1983) "A topological and functional model of epitopes on the structural glycoprotein of tick-borne encephalitis virus defined by monoclonal antibodies." <i>Virology</i> 126:525-537.	

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	30.	HEINZ, F.X. et al. (1994) "Structural changes and functional control of the tick-borne encephalitis virus glycoprotein E by the heterodimeric association with protein prM." <i>Virology</i> 198:109-117.	
	31.	HENCHAL, E.A. et al. (1982) "Dengue virus-specific and flavivirus group determinants identified with monoclonal antibodies by indirect immunofluorescence." <i>Am. J. Trop. Med. Hyg.</i> 31:830-836.	
	32.	HENCHAL, E.A. et al. (1985) "Epitopic analysis of antigenic determinants on the surface of dengue 2 virion using monoclonal antibodies." <i>Am. J. Trop. Med. Hyg.</i> 34:162-169.	
	33.	HENCHAL, E.A. et al. (1986) "Identification of an antigenic and genetic variant of dengue-4 virus from the Caribbean." <i>Am. J. Trop. Med. Hyg.</i> 35:393-400.	
	34.	HENCHAL, E.A. et al. (1988) "Synergistic interactions of anti-NS1 monoclonal antibodies protect passively immunized mice from lethal challenge with dengue 2 virus." <i>J. Gen. Virol.</i> 69:2101-2107.	
	35.	HOLZMANN, H. et al. (1995) "Tick-borne encephalitis virus envelope protein E-specific monoclonal antibodies for the study of low pH-induced conformational changes and immature virions." <i>Arch. Virol.</i> 140:213-221.	
	36.	HUBER, C. et al. (1993) "The V _K genes of the L regions and the repertoire of V _K gene sequences in the human germ line." <i>Eur. J. Immunol.</i> 23:2868-2875.	
	37.	International Preliminary Report on Patentability from PCT/US2004/040674.	
	38.	JOHNSON, S. et al. (1997) "Development of a humanized monoclonal antibody (MEDI-493) with potent in vitro and in vivo activity against respiratory syncytial virus." <i>J. Infect. Dis.</i> 176:1215-1224.	
	39.	KAUFMAN, B.M. et al. (1987) "Monoclonal antibodies against dengue 2 virus E-glycoprotein protect mice against lethal dengue infection." <i>Am. J. Trop. Med. Hyg.</i> 36:427-434.	
	40.	KIMURA-KURODA, J. et al. (1988) "Protection of mice against Japanese encephalitis virus by passive administration with monoclonal antibodies." <i>J. Immunol.</i> 141:3606-3610.	
	41.	LAI, C.J. et al. (1991) "Infectious RNA transcribed from stably cloned full-length cDNA of dengue type 4 virus." <i>PNAS USA</i> 88:5139-5143.	
	42.	LANCIOTTI, R.S. et al. (1997) "Molecular evolution and phylogeny of dengue type 4 virus." <i>J. Gen. Virol.</i> 78:2279-2286.	
	43.	LIN, C.-W. et al. (2003) "A functional epitope determinant on domain III of the Japanese encephalitis virus envelope protein interacted with neutralizing-antibody combining sites." <i>J. Virol.</i> 77:2600-2606.	
	44.	MANDL, C.W. et al. (1989) "Antigenic structure of the flavivirus envelope protein E at the molecular level, using tick-borne encephalitis virus as a model." <i>J. Virol.</i> 63:564-571.	
	45.	MARKOFF, L. (1989) "In vitro processing of dengue virus structural proteins: cleavage of the pre-membrane protein." <i>J. Virol.</i> 63:3345-3352.	
	46.	MARUYAMA, T. et al. (1999) "Ebola virus can be effectively neutralized by antibody produced in natural human infection." <i>J. Virol.</i> 73:6024-6030.	
	47.	MATHEWS, J.H. et al. (1984) "Elucidation of the topography and determination of the protective epitopes on the E glycoprotein of Saint Louis encephalitis virus by passive transfer with monoclonal antibodies." <i>J. Immunol.</i> 132:1533-1537.	

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	48.	MEN, R. et al. (1991) "Carboxy-terminally truncated dengue virus envelope glycoproteins expressed on the cell surface and secreted extracellularly exhibit increased immunogenicity in mice." <i>J. Virol.</i> 65:1400-1407.	
	49.	MEN, R. et al. (1996) "Dengue type 4 virus mutants containing deletions in the 3' noncoding region of the RNA genome: analysis of growth restriction in cell culture and altered viremia pattern and immunogenicity in rhesus monkeys." <i>J. Virol.</i> 70:3930-3937.	
	50.	MEN, R. et al. (2004) "Identification of chimpanzee fab fragments by repertoire cloning and production of a full-length humanized immunoglobulin g1 antibody that is highly efficient for neutralization of dengue type 4 virus." <i>J. Virol.</i> 78:4665-4674.	
	51.	MODIS, Y. et al. (2003) "A ligand-binding pocket in the dengue virus envelope glycoprotein." <i>PNAS USA</i> 100:6986-6991.	
	52.	OGATA, N. et al. (1993) "Markedly prolonged incubation period of hepatitis B in a chimpanzee passively immunized with a human monoclonal antibody to the α determinant of hepatitis B surface antigen." <i>PNAS USA</i> 90:3014-3018.	
	53.	OKUNO, Y. et al. (1985) "Rapid focus reduction neutralization test of Japanese encephalitis virus in microtiter system." <i>Arch. Virol.</i> 86:129-135.	
	54.	PECH, M. et al. (1985) "A large section of the gene locus encoding human immunoglobulin variable regions of the kappa type is duplicated." <i>J. Mol. Biol.</i> 183:291-299.	
	55.	PERSSON, M.A. et al. (1991) "Generation of diverse high-affinity human monoclonal antibodies by repertoire cloning." <i>PNAS USA</i> 88:2432-2436.	
	56.	RAFFAI, R. et al. (2000) "Binding of an antibody mimetic of the human low density lipoprotein receptor to apolipoprotein E is governed through electrostatic forces." <i>J. Biol. Chem.</i> 275:7109-7116.	
	57.	REY, P.A. et al. (1995) "The envelope glycoprotein from tick-borne encephalitis virus at 2 Å resolution." <i>Nature</i> 375:291-298.	
	58.	ROEHRIG, J.T. et al. (1998) "Monoclonal antibody mapping of envelope glycoprotein of the dengue 2 virus, Jamaica." <i>Virology</i> 246:317-328.	
	59.	ROSEN, L. (1986) "Dengue in Greece in 1927 and 1928 and the pathogenesis of dengue hemorrhagic fever: new data and different conclusion." <i>Am. J. Trop. Med. Hyg.</i> 35:642-653.	
	60.	SANNA, P.P. et al. (1999) "pFab-CMV, a single vector system for the rapid conversion of recombinant fabs into whole IgG1 antibodies." <i>Immunotechnology</i> 4:185-188.	
	61.	SCHLESINGER, J.J. et al. (1999) "Influence of the human high-affinity IgG receptor FcγRI (CD64) on residual infectivity of neutralized dengue virus." <i>Virology</i> 260:84-88.	
	62.	SCHOFIELD, D.J. et al. (2000) "Identification by phage display and characterization of two neutralizing chimpanzee monoclonal antibodies to the hepatitis E virus capsid protein." <i>J. Virol.</i> 74:5548-5555.	
	63.	SHIELDS, R.L. et al. (2001) "High resolution mapping of the binding site on human IgG1 for FcγRI, FcγRII, FcγRIII, and FcRn and design of IgG1 variants with improved binding to the FcγR." <i>J. Biol. Chem.</i> 276:6591-6604.	

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	64.	STADLER, K. et al. (1997) "Proteolytic activation of tick-borne encephalitis virus by furin." <i>J. Virol.</i> 71:8475-8481.	
	65.	TAKAHASHI, N. et al. (1982) "Structure of human immunoglobulin gamma genes: implications for evolution of a gene family." <i>Cell</i> 29:671-679.	
	66.	TOMLINSON, I.M. et al. (1992) "The repertoire of human germline V _H sequences reveals about fifty groups of V _H segments with different hypervariable loops." <i>J. Mol. Biol.</i> 227:776-798.	
	67.	WANG, W.-K. et al. (2002) "Dengue type 3 virus in plasma is a population of closely related genomes: quasispecies." <i>J. Virol.</i> 76:4662-4665.	
	68.	WENGLER, G. et al. (1989) "Cell-associated west nile flavivirus is covered with E + pre-M protein heterodimers which are destroyed and reorganized by proteolytic cleavage during virus release." <i>J. Virol.</i> 63:2521-2526.	
	69.	WILLIAMSON, R.A. et al. (1993) "Human monoclonal antibodies against a plethora of viral pathogens from single combinatorial libraries." <i>PNAS USA</i> 90:4141-4145.	
	70.	WOOD, C.R. et al. (1990) "High level synthesis of immunoglobulins in Chinese hamster ovary cells." <i>J. Immunol.</i> 145:3011-3016.	
	71.	WU, T.T. et al. (1993) "Length distribution of CDRH3 in antibodies." <i>Proteins Struct. Funct. Genet.</i> 16:1-7.	

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